IN THE CLAIMS:

1. - 28. ***cancelled***

29. *(currently amended)* A process for evaluating an aging property of a distributed Bragg reflector (DBR) laser, the DBR laser comprising a laser cavity bounded on a first end by a reflective surface and a tunable reflector portion located adjacent to a second, opposing end of the laser cavity, said tunable reflector portion including a Bragg grating that functions as a distributed reflector, the tuning supplied by a tuning current applied across said tunable reflector, the process comprising the steps of:

a) ~~determining~~ providing an initial relationship $\lambda(I)$ between the laser output wavelength λ_i and tuning current I as applied to the tunable reflector portion;

b) placing the laser cavity in a non-lasing state;

c) illuminating the Bragg grating by an external light source;

d) ~~providing~~ applying a first tuning current to said tunable reflector portion and measuring a reflected spectrum and determining a Bragg peak wavelength $\lambda_{B,i}$ for said tuning current I;

e) repeating step d) for a plurality of tuning currents to determine a Bragg peak wavelength for each tuning current, defined as a pre-aging tuning current;

f) turning on and aging said laser cavity, then returning said laser cavity to the non-lasing state;

g) repeating step d) for the plurality of tuning currents to determine a post-aging Bragg peak wavelength $\lambda_{B,n}$ for each tuning current I;

h) ~~determining~~ calculating , for each Bragg peak wavelength λ_B, a functional relationship between a pre-aging tuning current I_i and a post-aging tuning current I_n, where I_n-I_i=$f(\lambda_{B,n}(I_i) - \lambda_{B,i}(I_i))$;

i) selecting a laser output wavelength λ_i;

j) ~~finding~~ selecting a pre-aging tuning current I for producing the selected output laser wavelength λ_i, using the relationship ~~of~~ provided in step a); and

k) applying a post-aging tuning current I_n to said tunable reflector portion associated with the pre-aging tuning current I_i ~~found~~ selected in step j), the post-aging tuning current selected using the functional relationship ~~of~~ calculated in step h).

30. *(original)* The process as defined in claim 29 wherein in performing steps b) and f), the laser is placed in a non-lasing state by reducing the reflectivity of the reflective surface disposed at the first end of the laser cavity.

31. *(original)* The process as defined in claim 29 wherein in performing steps b) and f) the laser is placed in a non-lasing state by removing an input bias current from the laser cavity.

32. *(original)* The process as defined in claim 29 wherein in performing step f) the laser is aged through conventional use.

33. *(original)* The process as defined in claim 29 wherein in performing step f), an accelerated aging process is used.

34. *(currently amended)* The process as defined in claim 29 wherein the process is used to mark a DBR laser as disqualified using the following steps for a selected DBR laser:

l) ~~defining~~ selecting a marking tuning current;

m) determining a pre-aging Bragg peak wavelength associated with said marking tuning current;

n) determining a post-aging Bragg peak wavelength associated with said marking tuning current; and

o) marking said DBR as disqualified for use if the post-aging Bragg peak wavelength has shifted more than a predetermined amount from the pre-aging Bragg peak wavelength.

35. *(original)* The process as defined in claim 34 including the following step of:

p) qualifying the DBR laser as stable if the post-aging Bragg peak wavelength has not shifted more than a predetermined amount from the pre-aging Bragg peak wavelength.

36. *(currently amended)* A system for evaluating an aging property of a distributed Bragg reflector (DBR) laser, the DBR laser comprising a laser cavity bounded on a first end by a reflective surface and a tunable reflector portion located adjacent to a second, opposing end of the laser cavity, said tunable reflector portion including a Bragg grating that functions as a distributed reflector, the tuning supplied by a tuning current applied across said tunable reflector, the system comprising:

a spectrum analyzer positioned to receive light reflected by the Bragg grating of the tunable reflector portion;

an adjustable current source for applying an adjustable tuning current to said tunable reflector portion; and

a processor coupled to both the laser cavity and said tunable reflector portion, said processor including program storage media configured to perform the following functions ~~for~~:

a) ~~determining~~ providing an initial relationship $\lambda(I)$ between the laser output wavelength λ_i and tuning current I as applied to the tunable reflector portion;

b) placing the laser cavity in a non-lasing state;

c) illuminating the Bragg grating by an external light source;

d) ~~providing~~ applying a first tuning current to said tunable reflector portion and measuring a reflected spectrum and determining a Bragg peak wavelength $\lambda_{B,i}$ for said tuning current I;

e) repeating step d) for a plurality of tuning currents to determine a Bragg peak wavelength for each tuning current, defined as a pre-aging tuning current;

f) turning on and aging said laser cavity, then returning said laser cavity to the non-lasing state;

g) repeating step d) for the plurality of tuning currents to determine a post-aging Bragg peak wavelength $\lambda_{B,n}$ for each tuning current I;

h) ~~determining~~ calculating , for each Bragg peak wavelength λ_B, a functional relationship between a pre-aging tuning current I_i and a post-aging tuning current I_n, where $I_n - I_i = f(\lambda_{B,n}(I_i) - \lambda_{B,i}(I_i))$;

i) selecting a laser output wavelength λ_i;

j) ~~finding~~ selecting a pre-aging tuning current I for producing the selected output laser wavelength λ_i, using the relationship ~~of~~ provided in step a); and

k) applying a post-aging tuning current I_a to said tunable reflector portion associated with the pre-aging tuning current I_i ~~found~~ selected in step j), the post-aging tuning current selected using the functional relationship ~~of~~ calculated in step h).

37. *(currently amended)* The system as defined in claim 36 wherein the program storage media of the processor is used to mark a DBR laser as disqualified and is further configured to perform ~~using~~ the following steps for a selected DBR laser:

l) defining a marking tuning current;

m) determining a pre-aging Bragg peak wavelength associated with said marking tuning current;

n) determining a post-aging Bragg peak wavelength associated with said marking tuning current; and

o) marking said DBR as disqualified for use if the post-aging Bragg peak wavelength has shifted more than a predetermined amount from the pre-aging Bragg peak wavelength.

38. *(currently amended)* The system as defined in claim 37 wherein the program storage media of the processor is used to qualify a DBR laser and is further configured to perform ~~by using~~ the step of comparing the post-aging Bragg peak wavelength to the pre-aging wavelength to determine if the post-aging Bragg peak wavelength has not shifted more than a predetermined amount from the pre-aging Bragg peak wavelength.